

# Childhood Lead Poisoning- A Silent Poison

April 19-20, 2023

Presenting To

Attendees| 30<sup>th</sup> Annual Arizona Immunization Conference

Ginny De La Cruz| Program Manager



ARIZONA DEPARTMENT  
OF HEALTH SERVICES

*Health and Wellness for all Arizonans*

# Learning Objectives

**Upon completion of this presentation, learners should be able to:**

- ✓ Describe ADHS' screening recommendations
- ✓ Understand sources, routes and health effects of lead exposure
- ✓ Understand follow-up recommendations for children with elevated blood lead levels



ARIZONA DEPARTMENT  
OF HEALTH SERVICES

*Health and Wellness for all Arizonans*

# WHO SHOULD BE TESTED FOR LEAD?



ARIZONA DEPARTMENT  
OF HEALTH SERVICES

*Health and Wellness for all Arizonans*

# Screening Recommendations

- 1. CDC recommends that all children be tested for lead at 1 and 2 years of age or 2-6 years old if not previously tested**
- 2. All children on AHCCCS are required to get a blood lead test.**
- 3. All recent immigrants, foreign adoptees, and refugee children ages 6 to 16 years should receive a blood lead test.**



ARIZONA DEPARTMENT  
OF HEALTH SERVICES

*Health and Wellness for all Arizonans*

# **WHY DO WE NEED TO TEST CHILDREN UNDER THE AGE OF 6?**



ARIZONA DEPARTMENT  
OF HEALTH SERVICES

*Health and Wellness for all Arizonans*

# Why are young children so sensitive to lead toxicity?

- ❖ Children under the age of six years are especially at risk
- ❖ They are highly exposed due to the hand to mouth activity. Hence most young children get lead poisoning by ingesting it.



ARIZONA DEPARTMENT  
OF HEALTH SERVICES

*Health and Wellness for all Arizonans*

# Health Effects

Exposure to lead can have a wide range of effects on a child's development and behavior:

- delayed growth
- hearing loss
- intellectual disabilities
- behavioral issues
- seizures, coma, and even death



ARIZONA DEPARTMENT  
OF HEALTH SERVICES

*Health and Wellness for all Arizonans*

**The only way to know if a child has lead poisoning is through a blood test!**





# Interpreting Results

- ❖ BLLs are measured in *micrograms of lead per deciliter* of blood ( $\mu\text{g}/\text{dL}$ ).
- ❖ A reference level of  $3.5 \mu\text{g}/\text{dL}$  is used to identify children with blood lead levels that are in the 97.5th percentile.



# Recent Case Study

9 month old refugee child

Initial elevated capillary blood lead level of  $18.1 \mu\text{g/dL}$

Lead content was so high that it was above the quantifiable range on the lab instrument



# Other sources of lead

- Soil
- Imported glazed pottery
- Mexican candy
- Folk medicines
- Antiques
- Certain jobs and hobbies
- Travel



ARIZONA DEPARTMENT  
OF HEALTH SERVICES

*Health and Wellness for all Arizonans*

# **PUBLIC HEALTH ACTION: WHAT DO WE DO?**

- Enhance blood lead surveillance
- Ensure blood lead testing and reporting
- Case Management of children with elevated blood lead levels

# SCOPE OF CHILDHOOD LEAD POISONING IN ARIZONA



ARIZONA DEPARTMENT  
OF HEALTH SERVICES

*Health and Wellness for all Arizonans*

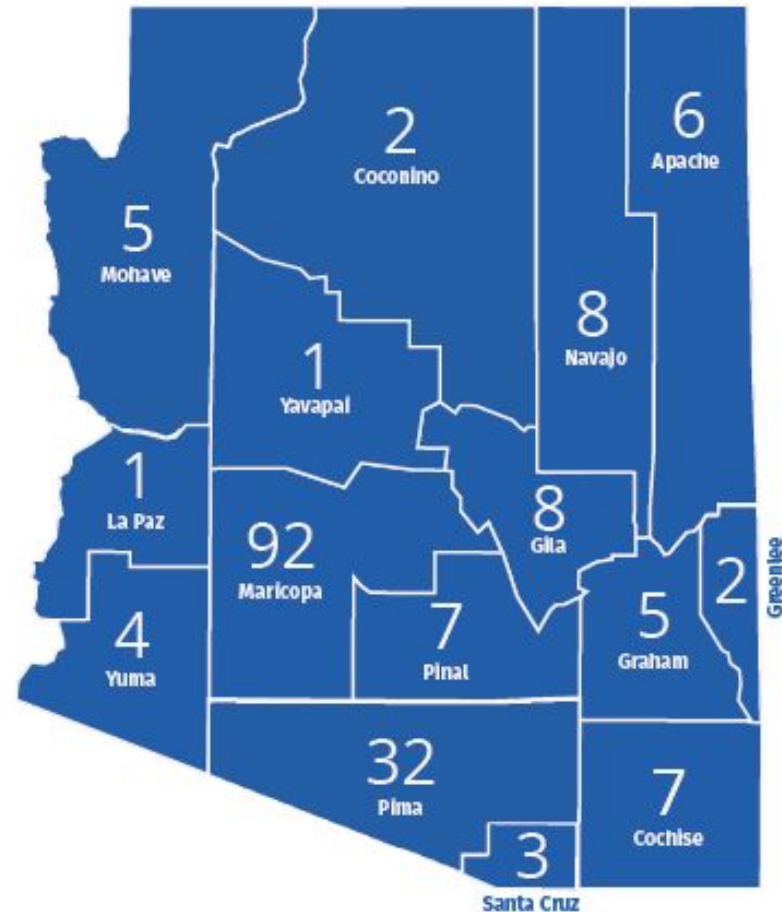


## Case Distribution Across the State

This map shows the distribution of unique children under the age of 6 years reported with a venous blood lead level at or above the BLRV in 2021.

In 2021, **183** Arizonan children under the age of 6 years had BLLs at or above the BLRV

Of these, 145 had their first reported BLL  $\geq$  the BLRV in 2021



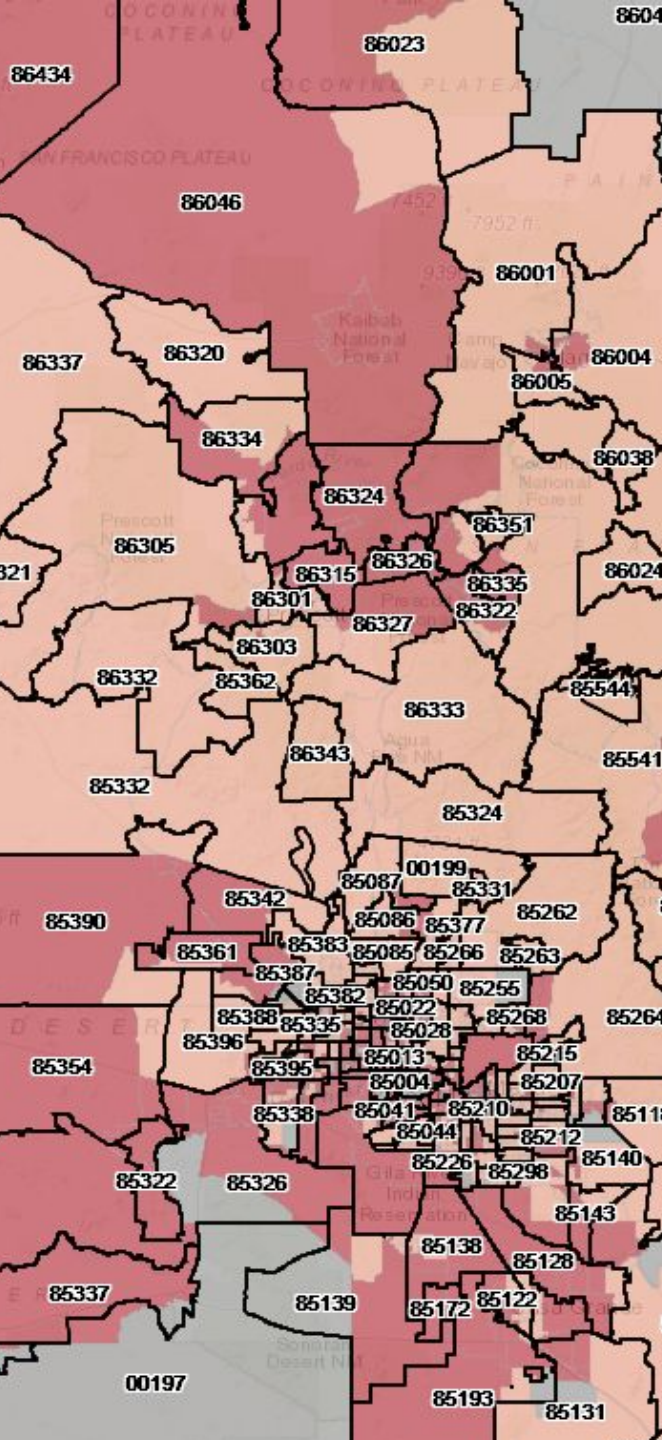
# AZ Blood Lead Testing Rates



ARIZONA DEPARTMENT  
OF HEALTH SERVICES

*Health and Wellness for all Arizonans*

**DRAFT**



# High Risk Areas in Arizona

[Mapping tool:](#)

[www.azhealth.gov/leadmap](http://www.azhealth.gov/leadmap)



blood test



Questionnaire



Questionnaire

**2018 Zip Code List**

**2018 Targeted Lead Screening Plan**



# Case Management



Reminders for follow-up testing

Educate parents

Offer limited lead investigations and environmental sampling

Referrals



ARIZONA DEPARTMENT  
OF HEALTH SERVICES

*Health and Wellness for all Arizonans*

# **CLINICAL MANAGEMENT OF CHILDREN WITH ELEVATED BLOOD LEAD LEVELS**



**ARIZONA DEPARTMENT  
OF HEALTH SERVICES**

*Health and Wellness for all Arizonans*

❖ **All children identified with elevated blood lead levels (EBLLs) should receive:**

- ✓ **Follow-up blood lead monitoring**
- ✓ **Assessment of nutritional status (Calcium, iron, vitamin C) and developmental milestones**
- ✓ **Education on lead poisoning**



ARIZONA DEPARTMENT  
OF HEALTH SERVICES

*Health and Wellness for all Arizonans*

Follow-up test within   if EBLL is    $\mu\text{g/dL}$ .

3 months

3.5–9

1–3 months

10–19

- ✓ **Neurodevelopmental assessment**
- ✓ **Lab work:** Rule out iron deficiency & prescribe iron if needed
- ✓ **Consider abdominal X-ray** (with bowel decontamination if indicated)

2 weeks – 1 month

20–44

ASAP

$\geq 45$

**Chelation therapy considered,**  
**[Contact poison control**  
**(800) 222-1222] for guidance**



ARIZONA DEPARTMENT  
OF HEALTH SERVICES

*Health and Wellness for all Arizonans*

# Bringing Community Partners together- Lead Poisoning Prevention Coalition

- State Medicaid-AHCCCS
- Refugee Resettlement Agencies
- HUD Grantees such as the City of Phoenix Lead Abatement Program
- Home Visiting Programs
- Early Headstart Programs
- WIC



ARIZONA DEPARTMENT  
OF HEALTH SERVICES

*Health and Wellness for all Arizonans*

# Take Away Messages

- We recommend that providers test all their patients
- Children are vulnerable to the effects of lead exposure, but it is entirely Preventable
- Many resources are available for both Providers and families

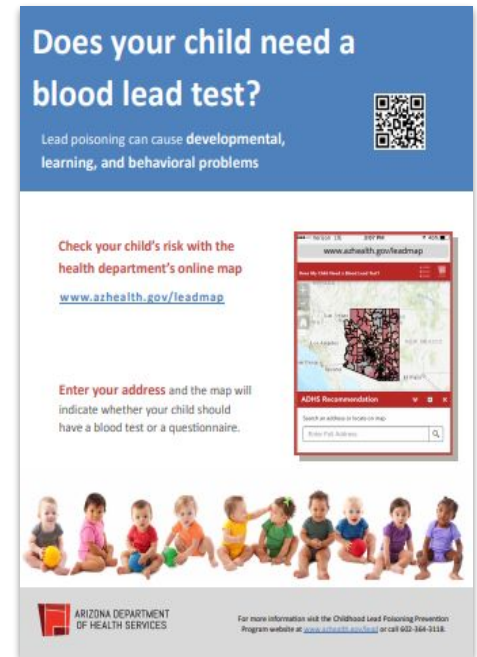


ARIZONA DEPARTMENT  
OF HEALTH SERVICES

*Health and Wellness for all Arizonans*

# RESOURCES

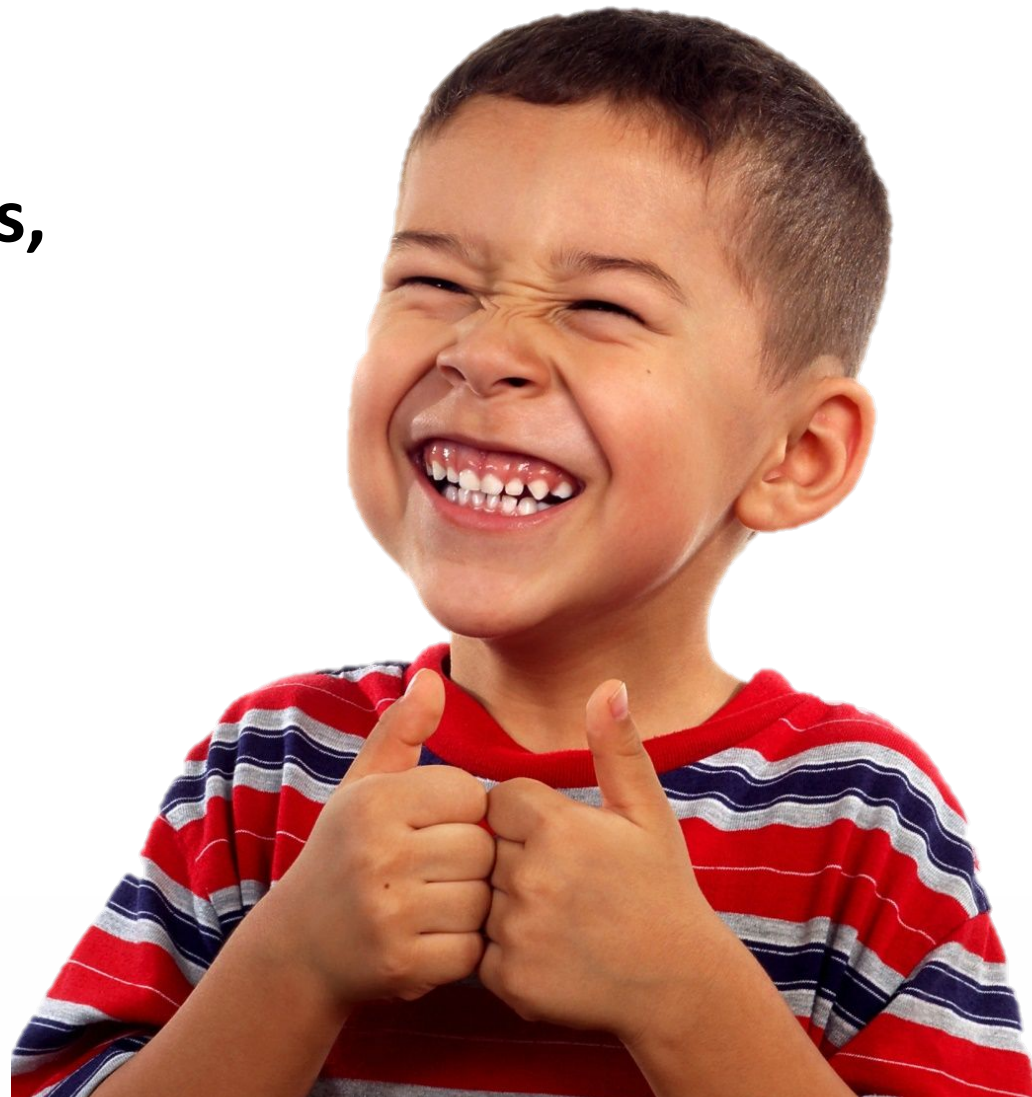
- ❖ **USB Provider Toolkit (Lego Brick)**
- ❖ **Waiting room posters (English and Spanish)**
- ❖ **Brochures and Handouts:**  
<https://www.azdhs.gov/preparedness/epidemiology-disease-control/lead-poisoning/index.php#brochures-handouts>
- ❖ **Clinical Management Flyer**



ARIZONA DEPARTMENT  
OF HEALTH SERVICES

*Health and Wellness for all Arizonans*

**Questions, Thoughts,  
Comments?**



**ARIZONA DEPARTMENT  
OF HEALTH SERVICES**

*Health and Wellness for all Arizonans*



# THANK YOU

Ginny De La Cruz | CLPPP-Manager

[healthyhomes@azdhs.gov](mailto:healthyhomes@azdhs.gov) | 602-364-3118

[azhealth.gov](http://azhealth.gov)

 [@azdhs](https://twitter.com/azdhs)

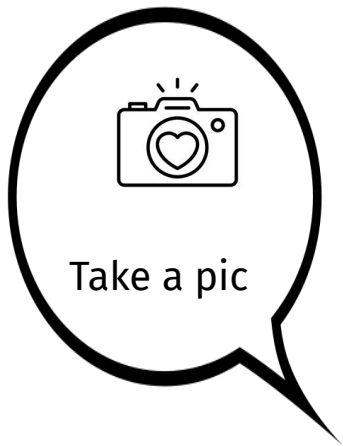
 [facebook.com/azdhs](https://facebook.com/azdhs)



ARIZONA DEPARTMENT  
OF HEALTH SERVICES

*Health and Wellness for all Arizonans*

# Continuing Education Credits 4/19/23



<https://www.surveymonkey.com/r/NXT25KL>

- Follow the QR code/Link to receive CEs for this session
- Select this session from the drop down menu.
- Update sessions you attended throughout the day.
- Go to conference app or program for more information.



<https://forms.office.com/r/dCVCcNUW2F>